FUEL LINE
Spring/Summer 2002

Defense Energy Support Center

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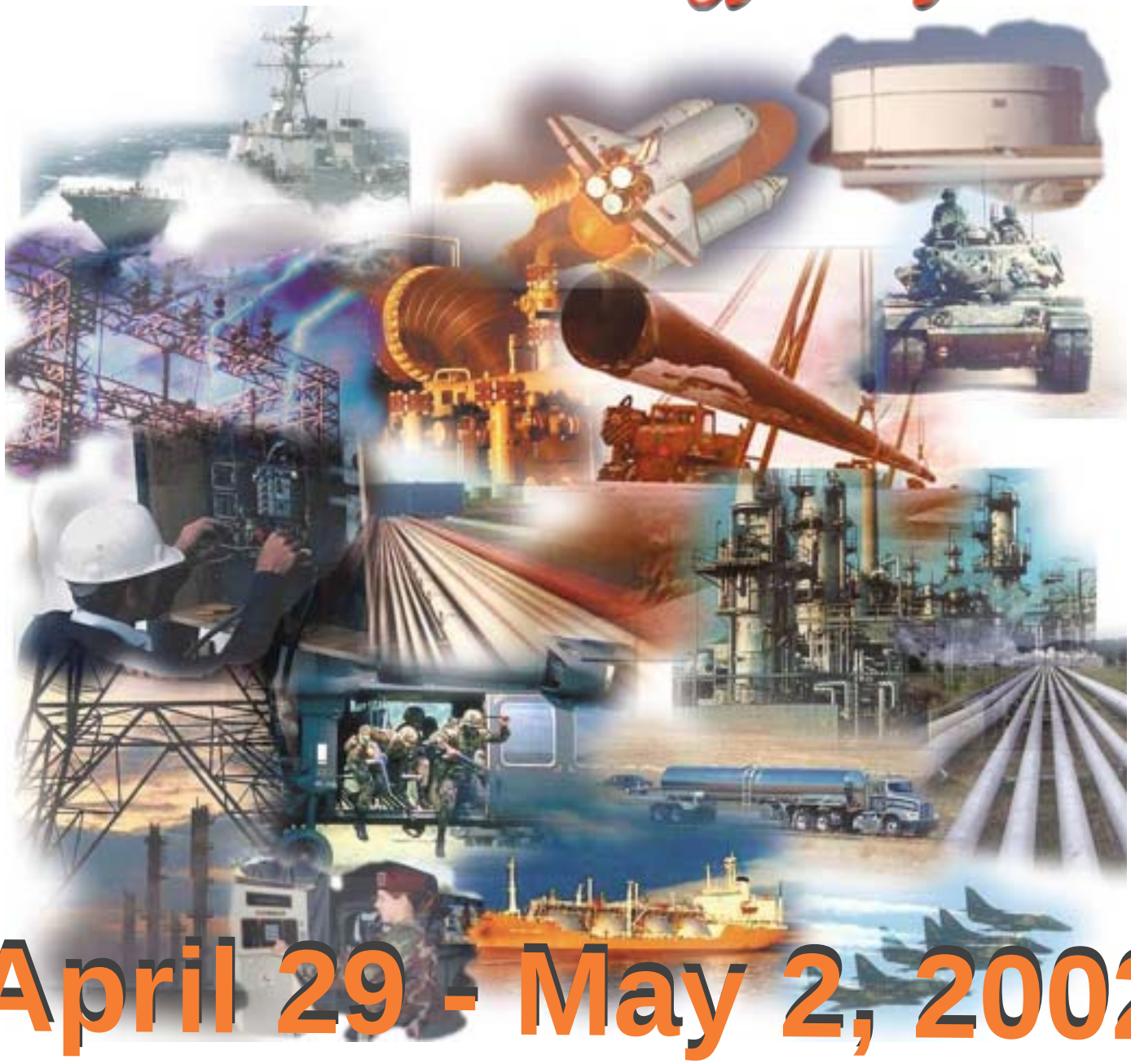
2002 Worldwide Energy Conference



April 29 - May 2, 2002

Washington, D.C.

DIRECTOR'S MESSAGE

If I look back at columns that appeared in this publication the better part of a year ago, I'm sure to find some words about Fuels Automated System (FAS) and how implementation was "just around the corner." Some of you will know that FAS ***was*** just around the corner; unfortunately the Department of Defense (DoD) added new corners.

About eight months ago, the Office of the Secretary of Defense (OSD) Comptroller implemented new standards for DoD Information Technology systems by directing that any new system had to meet the accounting requirements of the Federal Financial Managers Management Improvement Act (FFMIA). At the same time, the Director of Command, Control, Communications, Computers and Intelligence (C^4I) held the sole authority to approve the critical milestone III, which allows initial deployment.

In April, the FAS Program Manager (PM), Mr. Larry Bell, took us to the top. He cobriefed the undersecretary of defense (comptroller) and answered questions about the cost benefit of implementing FAS and the alternatives to FAS.

The permission to implement is also owed to huge contributions from the FAS PM team, Applications Support Group, the inventory accounting folks and others. Of course, we are just now at the beginning of what we thought would be close to completion, so we cannot sit back now and congratulate ourselves. The key Defense Energy Support Center (DESC) Commodity Business Units (CBUs) are taking ownership of the processes represented in the FAS systems being deployed in the next few months. In addition to those already deeply involved, will be the rank and file of the Bulk Fuels CBU and all the Regions who work the Bulk program every day.

On June 1, DESC began parallel operations at the United Kingdom and west coast test sites. These sites will operate for 60 days, with transaction data feeding both Defense Fuels Automated Management System (DFAMS) and FAS-ED (Energy Downstream and financials). At the end of 60 days parallel operations will cease, and FAS-ED will become the accountable system for the test sites. Thereafter, we'll be rolling new sites under as quickly as we can. If you have any questions about the timetable or your training needs, contact the Fort Belvoir Program Management Office through your supervisors and/or Region commanders.

The Direct Delivery set of business practices is now in development. We believe our experience makes it possible for each new CBU to be deployed faster than Bulk. To everyone who has helped bring FAS to life, a huge "thanks" from me.

Milestone III approval for FAS was not DESC's only milestone in March. March 29, was the last day of business for two of DESC's founding institutions -- The Americas offices in St. Louis and Fort Dix. We made the decision to close these two offices last year -- not because they were under performing, but because DESC's business base has changed over 50 years and better technology let us do more at greater distances. We also reshaped the Houston and Los Angeles offices, making an Americas region with two operating sites. This summer we will be carrying the change to Fort Belvoir, where the Commander, Americas, will join us and assume responsibility for all the distribution and transportation functions performed in the United States.

Continued on page 34.....

C O N T E N T S

Spring/Summer 2002

Shown Above:
Apple Jelly is not a welcome name to Air Force "fuelies." See what causes it and what is being done to find a solution.
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Shown Above:
DESC Missile Fuels recently held Exercise Serene Response VIII. See *page14* for all the details.

On the Cover:
Defense Energy Support Center 2002 Worldwide Energy Conference held. *Page 13*

Shown on Left: Supplies bound for Afghanistan. Read more about The Stans on *page 27.*

FUEL LINE

SPRING/SUMMER 2002

Defense Energy Support Center
www.desc.dla.mil

Defense Energy Support Center
8725 John J. Kingman Road
Suite 4950
Fort Belvoir, VA 22060-6222

DIRECTOR
Jeffrey A. Jones

DEPUTY DIRECTOR
Capt. Stuart D. Funk, SC, USN

EXECUTIVE OFFICER
Tony Frontiero

PUBLIC AFFAIRS OFFICER
Lynette S. Ebberts

EDITOR
Melissa L. Lenard

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PROMOTIONS AND AWARDS

DESC PACIFIC

On July 1, 2001, Capt. Dave Douglas, Commander, DESC Pacific and Mrs. Tracy Aicher, promote Commander, DESC Japan, Maj. Mark Aicher to his new rank of Lt. Col.

Capt. Dave Douglas, Commander, DESC-Pacific, administers the oath of office to newly promoted Lt. Col. Pete Camit, Commander, DESC-Middle Pacific. Camit was promoted Feb. 1, 2002.

DESC EUROPE

Maj. Steven Pray (left) was congratulated by Commander, DESC-Europe, Col. Stephen Passero (right) during the promotion ceremony held at DESC-Europe in Wiesbaden, Germany Nov. 30, 2001.

DESC Europe Servicemember Selected as Personnel of the Year

The Air Force selected Senior Master Sgt. David Alexander as the 2001 Staff Fuels Non-Commissioned Officer (NCO) of the Year. Alexander was selected to represent the Defense Logistics Agency (DLA) in this annual competition, while assigned as the operations superintendent at DESC Europe.

Of his numerous accomplishments during 2001, Alexander provided critical support to Operation Enduring Freedom. He developed and executed a plan to utilize the Turkish NATO Pipeline System (TNPS) and Mersin NATO depot to support huge increases in consumption during the early stages of operations in Afghanistan. His efforts resulted in a receipt rate increase of 47 percent.

Senior Master Sgt. David Alexander

Alexander reduced the dependence on the Air Force owned Yumurtalik Sea Terminal with the addition of a primary deep-water delivery point for tankers. By reducing tanker requirements, this effort will yield savings of $5 million annually.

Each year supply and fuels personnel are selected as “the best of the best” in their respective career fields. These awards provide Air Force-wide recognition of personnel who have made an outstanding contribution to supply or fuels operations.

DESC Honors Employees

Employees of the Defense Energy Support Center (DESC) were honored at the DESC Town Hall meeting March 13, 2002. The Town Hall meeting, held in the Andrew T. McNamara Headquarters Complex, served as a forum to tackle issues involving DESC and its employees. The awards ceremony and honored the selected individuals for meritorious achievement and service:

Military awards:

Maj. Gary E. Binder, U.S. Air Force, distinguished himself by exceptional meritorious service as Assistant Chief, Bulk Fuels Contracting Division and Executive Assistant to the Director, Defense Energy Support Center from Sept. 18, 2000 to Feb. 16, 2002. During this period, Binder contributed immeasurably to DESC's mission through the outstanding procurement and management of DESC's largest Bulk fuel programs as well as the skillful management of the Director's daily activities and travel.

Lt. Col. Charles H. Gross, U.S. Air Force, distinguished himself by exceptional meritorious achievement as a deployed member of DESC from Dec. 5, 2001 to Dec. 18, 2001 and from Jan. 15, 2002 to Jan. 31, 2002 in support of Operation Enduring Freedom. Gross deployed to Pakistan on these occasions to resolve significant petroleum operational challenges with the service components, the theater command, and the host nation.

Master Sgt. John W. Sims, U.S. Air Force, distinguished himself by exceptional meritorious service as the Administrative Noncommissioned Officer in Charge, Logistics Operations Center, Defense Logistics Agency, Europe, Wiesbaden, Germany, from Aug. 2001 to Feb. 2002. During this period, Sims provided key services to Defense Contingency Support Teams deployed to Operations JOINT GUARDIAN and JOINT FORGE.

Tech. Sgt. Michelle L. Yekel, U.S. Air Force Reserves distinguished herself through exceptional meritorious achievement as Superintendent, Personnel, DESC from Aug. 23, 2001 to March 8, 2002. During this period, Yekel's conscientious actions, diplomacy, and astute advice to DESC contributed materially to the accomplishments of the joint mission.

Lt. Col. Cox will be recognized on his return with the Joint Service Commendation Medal for his extraordinary achievements while assigned in Uzbekistan in support of Operation Enduring Freedom.

DESC Service Awards:

Karyl Gordon, Resources Management, 35 years
Raymond Gallegos, Missile Fuels, 35 years
Barbara Blackshere, Missile Fuels, 30 years
Raymond Roolf, Missile Fuels, 30 years
Gloria Larque, Missile Fuels, 20 years
Sharon Fajkus, Missile Fuels, 20 years
David Lawson, Missile Fuels, 20 years
Michael L. Mazur , Missile Fuels, 20 years

Military Awards

Shown in Photo, **left to right**: Maj. Gary Binder, Lt. Col. Charles H. Gross, DESC Director, Jeffrey Jones, Master Sgt. John W. Sims and Tech. Sgt. Michelle L. Yekel.

Service Awards

Shown in Photo, **left to right**: Jeffrey Jones, DESC Director and Karyl Gordon.

Shown in Photo, **left to right**: *Back Row*: Sharon Murphy, Director, Missile Fuels, **DESC Service Award Recipients**: Michael L. Mazur, Raymond Roolf and David Lawson. *Front Row*: Raymond Gallegos, Barbara Blackshere, Gloria Larque

CONGRATULATIONS

Employee of the Quarter

SANDRA CAESAR

Ms. Sandra Caesar was selected as the Defense Energy Support Center's (DESC) Employee of the Quarter for the first quarter, Fiscal Year, 2002.

Ms. Caesar, assigned as a Contracting Specialist in the Into-Plane Fuels Branch, Specialty Fuels Division, Direct Delivery, Fuels Commodity Business Unit (CBU), demonstrated remarkable performance in the execution of her duties.

Utilizing a relatively new contracting method, Ms. Caesar expertly and expeditiously used simplified acquisition procedures to establish the award of a contract in support of Task Force Falcon for operations in Kosovo. A quick study, she negotiated with the contractor to obtain the best terms for the $2.1 million contract, which was awarded in just three days.

Ms. Caesar has been a critical player in DESC's role in Operation Enduring Freedom. Eagerly responding to after-hours calls, Ms. Caesar was responsible for various taskings from DESC's Operations Center.

The consummate team player, she has mentored two new Into-Plane Branch employees, demonstrating exemplary patience by thoroughly explaining DESC business practices and procedures. Additionally, she performed two jobs as she filled in for an associate who was out with an extended illness. She also assisted Into-Plane contractor Shell Oil with obtaining overdue payments for invoices totaling more than $600,000.

While working closely with DESC's Air Force customers and Resources CBU personnel, she was instrumental in settling over $100,000 of unpaid invoices during the quarter, which proved to be very labor-intensive.

Ms. Caesar demonstrated total professionalism during the award period, as she has done throughout the year.

EVENTS

HARDWORK REWARDED

Defense Energy Support Center (DESC) Director, Jeffrey Jones, held a reception to honor and thank DESC employees for their hard work and dedication in support of Operation Enduring Freedom. Many employees put in numerous hours to aid the warfighter and support the ongoing events after the tragedy of Sept. 11, 2001.

DESC DEPUTY DIRECTOR OF OPERATIONS

VISITS DESC MISSILE FUELS

Shown Above: Col. Vance is briefed by Ray Roolf, Chief, Logistics Management Division. Also pictured is Gayle Wadsworth.

Col. Jack Vance, U.S. Army, Deputy Director, Defense Energy Support Center (DESC) Operations, recently visited DESC Missile Fuels Commodity Business Unit (CBU) in San Antonio, Texas. While there he was provided with briefings and walk-throughs of the San Antonio facility. Vance was able to meet and greet many employees of the Missile Fuels CBU.

Shown Above: Col. Vance shakes hands with Rod Fischer.

Shown Above: Col. Vance with Cathy Mokry, Chief, Material Support Branch and Ray Roolf, Chief, Logistics Management Division .

EXECUTIVE COUNCIL MEETING

The Defense Energy Support Center's Executive Council Meeting was recently held at the Fort Belvoir Officers' Club.

Shown Above (left to right): Capt. Stuart Funk, DESC Deputy Director, Jeffrey Jones, DESC Director and Col. Jack Vance, DESC Deputy Director of Operations.

Taking time to smile for the camera!

Shown Above: Council members listen to morning agenda

2002 Worldwide Energy Conference

By Lana D. Hampton
DESC Public Affairs

The 2002 Worldwide Energy Conference was held in Washington, D.C. April 29 through May 2, 2002. This year's conference theme, "Partnering for Total Energy Solutions," provided an opportunity to exchange information between energy industries and their customers in the U.S. Department of Defense on an array of energy and industry topics.

Ribbon cutting during the opening ceremony of the trade show: (from left to right) Terry E. Singer, Executive Director, National Association of Energy Service Companies; Thomas Kuhn, President, Edison Electric Institute; Vice Adm. Keith W. Lippert, DLA Director; Jeffrey A. Jones, DESC Director and Red Caveney, President and Chief Executive Officer, American Petroleum Institute. Capt. Stuart D. Funk, DESC Deputy Director is at the podium. (photo by Kristine M. Crum)

The Defense Energy Support Center (DESC), American Petroleum Institute (API), Edison Electric Institute (EEI) and the National Association of Energy Service Companies (NAESCO) co-sponsored the 2002 Worldwide Energy Conference. One of the conference goals was to provide over 1,200 attendees the opportunity to stay current on government energy initiatives and programs, as well as the latest technologies and services available in the private sector.

The first day of the conference included Military Services Day. This event provided representatives of the service branches an opportunity to meet separately and discuss key service specific energy issues. The day concluded with the opening ceremony of the trade show, which included 117 exhibitors displaying state-of-the-art energy products and services.

The remaining days of the conference consisted of three general sessions, seven panel discussions and 42 workshops.

Keynote speakers during the morning general sessions included Mr. Pete Ragauss, Chief Executive Officer of Air British Petroleum, the Honorable David K. Garman, U.S. Department of Energy's Assistant Secretary for Energy Efficiency and Renewable

Attendees during one of the three morning general sessions held at the 2002 Worldwide Energy Conference. (photo by Fred Murphy)

Energy and Mr. Mohammed I. Hakki, President and Chief Executive Officer of Worldnet.com. Ragauss and Garman addressed issues and future challenges concerning the petroleum and energy community. Hakki addressed the Middle East conflict.

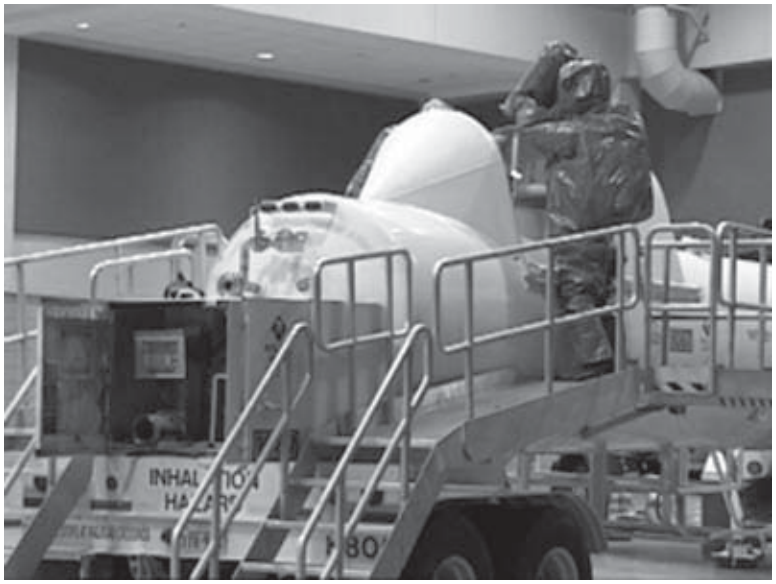
Subject matter experts from industry, the military services and DESC held timely and relevant panel discussions ranging from Subcontracting to Small Business Energy Companies to Advanced Field Level Diagnostics.

With over 100 attendees in many of the workshops, presenters once again represented industry, the military services and DESC as they discussed all aspects of the fuel and energy business.

Plans are already underway to ensure future Worldwide Energy Conferences are just as successful.

Exercise "Serene Response VIII"

DESC Missile Fuels conducts emergency response exercise



Shown Above: Highway Mitigation

A hazardous chemical spill could happen on any given day, at any given time, anywhere in the United States. Does anyone know what types, or how much, hazardous material is transported through his or her city or state? Is anyone responsible for making John Doe aware of the amount or frequency of these hazardous shipments? The answer is no!

The state is only required to report to the Environmental Protection Agency (EPA) the types and amounts of hazardous materials stored within their state. No city or state official can tell you how much, or when, hazardous material is transported through your state.

DESC Missile Fuels (DESC-M) Commodity Business Unit (CBU) transports nothing but hazardous material. They know the risks involved and the devastation that a hazardous chemical spill can have on the public and the environment. For the last 12 years the Missile Fuels organization, located at Lackland Air Force Base (AFB) in San Antonio, Texas, has conducted emergency response exercises.

DESC is committed to protecting the public and environment by preparing all the state and local communities along the highway and rail routes for a spill or leak of what the Department of Transportation (DoT) considers dinitrogen tetroxide (N204), the most dangerous chemical transported over the nations highways and railways.

DESC's recent emergency response exercise, dubbed "Serene Response VIII," was conducted March 12-14, 2002, in Vicksburg, Miss. Serene Response is an exercise of the DESC Emergency Response Plans for the transportation of dinitrogen tetroxide, by both highway and rail. The exercises were presented to federal, state and local emergency response agencies as well as various railroad companies. The purpose of the exercise was to educate and inform those agencies of the characteristics and hazards of the product and the configuration of the

transport equipment to better prepare them for a response to an incident or accident involving N2O4.

Highway exercises are conducted every two years and rail exercises are subsequently conducted every three years as mandated by DoT.

The rail exercise was originally scheduled for October 2001 in Vicksburg, Miss., however, due to the events of Sept. 11, it was postponed and rescheduled for March 2002. DESC-M considers it vital to conduct exercises on an actual N2O4 route. There are very few areas across the nation where the rail and highway routes meet; Vicksburg, Miss. happens to be one because that is where the manufacturer resides.

What is dinitrogen tetroxide and what is it used for?

N2O4 is a missile propellant used in the Titan and Delta missile systems and the Space Shuttle. When N2O4 is combined with missile fuel, it produces the propulsion required for lift off eliminated the need for an ignition system. Its extreme hazardous nature is derived from the fact that it is a poison, oxidizer, and corrosive and is also identified as an inhalation hazard. It is transported in a liquid state. However, when released into the atmosphere, N2O4 turns into a gas, and although the propellant is water-soluble, it also reacts violently with water to form a nitric acid vapor or liquid.

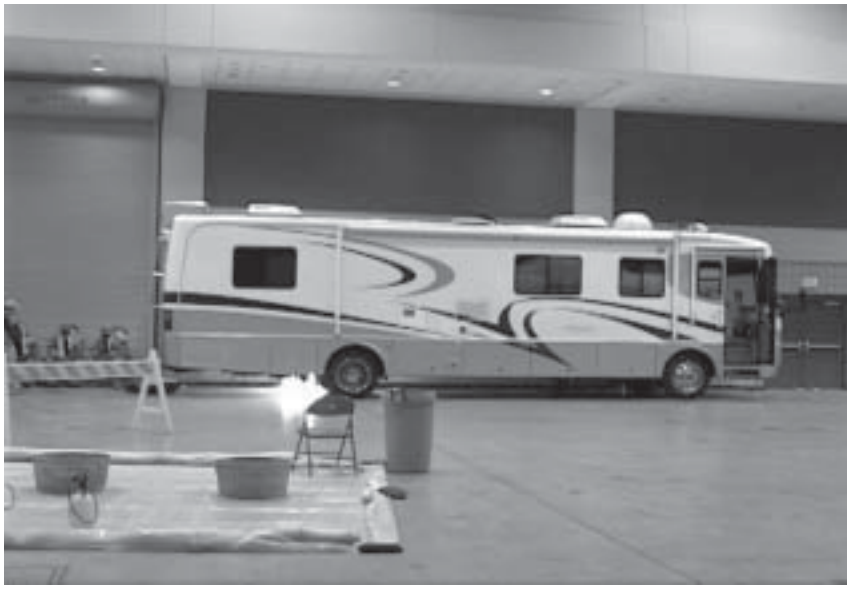
Emergency response exercises, ensuring the safe transportation of N2O4, have been conducted for 40 years. Much of what is done is mandated such as the emergency response plans, an exercise to test the effectiveness of the plan and determining designated routes. DESC-M initiative took each of these requirements one-step further. The emergency response plans were developed to facilitate integration into locally established plans. The exercise was designed to identify precisely what is expected of each responder. A state-of-the-art computer software program was developed to provide an objective, scientific analysis of the risk factors involved in shipping N2O4 to establish the safest routes.

Why is DESC involved in a response to a spill of N2O4?

Prior to 1986 it was the responsibility of the motor carrier, local authorities and the EPA to handle any emergency involving the leak or spill of a hazardous material. But in 1986, President Reagan signed an Executive Order entitled "Superfund Implementation," which made DoD, rather than the EPA responsible for releases from vessels and facilities under the control of DoD.

How does DESC prepare for such an event?

DESC practices and calls upon every emergency



Shown Above: Mobile Command Post Decontamination Area

response agency that may be required to respond to an N2O4 incident. Invitations were sent to every state and local response agency, railroad company and Air Force base along the route. The exercise began with orientation training. Briefings were presented by DESC-M, the manufacturer of N2O4, the contracted carriers who transport N2O4, the Kansas City Southern Railroad, and the Defense Transportation Tracking System Office.

These briefings were designed to inform those personnel involved with shipping, receiving, handling, transporting and responding to emergency functions of the product characteristics and hazards, trailer configuration, the emergency response plans, transportation procedures, and interagency emergency response procedures and responsibilities.

A mitigation demonstration and static display of equipment was provided to demonstrate the capabilities of the Technical Escort Team (TET), who accompany each bulk shipment of N2O4 through a simulated vapor release. TET suited up in protective clothing and breathing apparatus and demonstrated the use of their specialized equipment to resolve a simulated release. In addition, a static display of TET's mitigation equipment and local emergency response equipment was provided.

The equipment display provided for an exchange of information between responders on the latest developments in technology in plume plotters, leak detectors and communications equipment. The most important part of the exercise was the tabletop. This was designed to create interaction and coordination between local responders or railroad agencies, TET, and Air Force base responders to resolve a scripted scenario.

Shown Above: Rail Mitigation

"Serene Response VIII" also included two tests. A no-notice highway emergency communications test was conducted the day before the exercise. TET was provided an incident scenario indicating a Level III response, which requires notifications to local authorities, the Air Force Operations Center, DESC Logistics Management Materiel Support Branch, the nearest Air Force base to the scene of the incident and the National Response Center.

The communications test was considered successful in that all the required notifications were made. There was one small glitch: when contacting the 24-hour emergency number provided by the state of Mississippi, TET was put on hold for 10 minutes while they determined what county in Mississippi TET should contact. TET did what they would do in a real emergency; they hung up and called 911.

Once the local authorities were contacted, the Air Force Operations Center was contacted and they provided a communications net that included all required organizations. All remained on the line until the incident was resolved. A highway emergency safe haven test was also conducted as part of the Exercise. Once again TET was provided an incident scenario that put an N2O4 trailer in harms way due to bad weather. Safe haven is granted in emergency situations such as terrorism, civil disturbance, natural disaster, and severe

weather conditions. The Military Traffic Management Command (MTMC) under the Defense Transportation Regulation is responsible for providing safe haven to all DoD shipments.
Once an installation has been identified, it is the installation commander's discretion to grant the safe haven. TET initiated the call to MTMC and MTMC provided a Defense Switched Network (DSN) number for the Jackson Air National Guard. When TET advised they could not use a DSN number, MTMC questioned their relationship to the government.

Because TET is a contracted source, MTMC refused to give TET another number based on security issues. The safe haven test was terminated at that point. There were over 100 attendees at the Exercise. Critiques substantiated its success. DESC-M had four goals to achieve through this exercise:

The first goal was to identify potential problems – this was accomplished. As noted, there were communications test and safe haven problems which must be resolved.

Second, the goal was to increase the awareness and proficiency of the emergency responders – the comments submitted by the attendees indicated they learned from the Exercise. The next goal was to assess readiness -- this was accomplished through evaluation of the performance of the emergency responders who participated in both exercises.

The final goal was to improve the emergency response plans – improvements identified through the exercises are being incorporated into the next revision of the plan. In the interim, DESC-M is working with specific organizations to improve communication and understanding.

The DESC-M safety record is evidence of its commitment to the communities touched by each shipment. "Practice makes perfect," and an exchange of information through an exercise format ensures it.

Participants at exercise "Serene Response VIII" briefing.

DESC Small Business Office Reaching Out

The Department of Defense (DoD) is committed to sustained Small Business Program performance improvement and has established the program called the Small Business Reinvention Program. To accomplish this, DoD must ensure a greater level of program understanding, accountability and senior management support. DoD will annually measure itself and each military department and defense agency on overall program performance against established metrics and hold senior leadership accountable for Program accomplishments. The Small Business Program Reinvention is intended to increase the accountability of commanders and agency heads, while introducing more equitable means of measuring and assessing performance. The undersecretary of defense (acquisition, technology and logistics) described the improvement plan in the management of the Department of Defense Small Business Program. The plan includes small business initiatives and provides for qualitative factors that will be used to evaluate agency and subordinate activity performance.

Initiative 1: Native American Outreach Program

To further this program it is the intention of the small business office to locate, inform, educate and increase the participation of Native American firms in Defense Energy Support Center (DESC) energy acquisitions. The main thrust of this effort is to provide Native American firms an education on how to do business with DESC, thereby increasing their ability to take advantage of contracting opportunities. As a benefit, DESC will accrue additional sources of supply. There are plans to locate Native American firms involved in energy production and distribution, and to invite them to DESC to educate and to assist these firms with contracting opportunities at DESC.

Initiative 2: Locate, Encourage and Assist Small Business Refineries

The Small Business office acknowledges that there are some small refineries that do not do business with DESC directly or indirectly. There appear to be a number of reasons these firms have not done business with DESC. It is the Small Business office's intention to contact these Small Business refineries and determine the basis for the lack of participation in becoming either a source of supply directly or through distributors. The success of the overall Small Business Program depends primarily upon the ability of small distributors, marketers, dealers or brokers to have access to small manufacturers. Over the past 20 years, the small refinery base has decreased because of mergers, bankruptcy and closures. The effort to increase Small Business participation has been directly related to the decrease in the number of Small Business refineries. *Continued on Page 33*

US Military Campaign Puts Onus On DESC Flexibility

Jet Fuel Intelligence

The Defense Energy Support Center (DESC), has its work cut out as the U.S. military gears up to fight the two-front war on terrorism at home and overseas. To provide fuel for U.S. forces in Afghanistan, DESC is taking full advantage of the flexibility built into its fuel procurement strategy, whereby liftings from commercial airports supplement its large-scale purchases under bulk contracts.

DESC spent much of the 1990s winnowing down jet fuel stocks and purchases in the aftermath of the Cold War. In the 10 years from September 1988 to September 1997, the military's annual worldwide jet fuel purchases fell by about 42 percent to an average 3.3 billion gallons (216,000 barrels per day (b/d)).

During the Cold War era, the military threat was geographically contained within the Soviet Union and its allies. But this new kind of war promulgated by President Bush requires far more flexibility in deploying fuel supplies and material, since the U.S. has vowed to seek out terrorists in any country where they are harbored. Since Sept. 11, DESC has seen an increase in the quantities of military fuel required to support U.S. forces on the home front and overseas, including central Asia. It anticipates an 11.4 percent increase in total jet fuel purchases in the current fiscal year, which began last Oct. 1.

Of the total 3.9 billion gallons (254,400 b/d) worldwide that DESC expects to buy in fiscal 2002, 2.9 billion gallons or some 74 percent of the volume is earmarked for U.S. operations. In the three months between Sept. 11 and Dec. 11, the North American Aerospace Defense Command conducted 13,000 sorties over U.S. airspace involving 250 aircraft. Now that the government is taking over airport security, those missions will presumably be reduced (Jet Fuel Intelligence (JFI) Jan.21,p1).

Over the next five years, DESC anticipates that fuel procurement volumes will be similar to the 3.5 billion gallons (228,310 b/d) purchased in fiscal year 2001 which ended on Sept. 30. About 77 percent of those requirements, or some 2.7 billion gallons, were for military operations in the U.S.

Fueling The Afghan War

In an interview with JFI, DESC officials outlined how they provided some 289 million gallons of jet fuel to support the war effort in Afghanistan over the last four months: "First, we redistributed fuel from our storage outside the area of operations.

Second, we moved fuel already under contract from areas outside the area of operations. These two approaches have been successful due to a decrease in consumption in other geographical areas.

Finally, we entered into fueling contracts at commercial locations, as well as increased quantities on existing (into-plane) contracts." DESC officials say that since Sept. 11, some 69 million gallons of fuel were redistributed from existing bulk storage facilities, another 184 million gallons were lifted under existing bulk fuel contracts, and an additional 36 million gallons were purchased under bulk contracts to support the military campaign in Afghanistan. Over about 110 days that the campaign was at full throttle, that works out to some 61,000 b/d.

To extend the scope of its fuel procurement for central Asia, DESC is likely to rely heavily on its successful AIR (Aviation Into-Plane Reimbursement) Card program, whereby military pilots can refuel their aircraft at commercial airports around the world under DESC's into-plane program.

While this system accounts for a relatively minor 3-5 percent of total DESC jet fuel purchases each year, it provides enormous flexibility that bulk contracts do not afford.

DESC says that its AIR Card Program, coupled with extensive into-plane contract coverage, continues to provide its customers with expanded options to meet their needs for refueling and ancillary services worldwide.

The AIR Card has not only decreased overall operating costs to the customer, but also minimized hard-copy reporting via Electronic Data Interchange (EDI) for billing and program management purposes.

Since the AIR Card program began in 1997, DESC says that it "is a phenomenal success from the customers' standpoint, with cost avoidances in excess of $20 million." It can be used at locations where DESC has an into-plane contract, or at airports where no such contract exists provided the jet fuel supplier accepts the card.

The AIR Card is now widely accepted at approximately 5,000 commercial airports around the world.

Pakistan's Karachi airport is one location that has seen a marked increase in military activity in recent weeks.

The British-led international security force in Afghanistan, authorized by the United Nations in late December, is using Karachi as a transit point for staging its operations.

Known as the International Security Assistance Force (ISAF), it includes 17 nations and is acting independently of the US military's anti-terrorism campaign.

ISAF currently operates one or two daily flights from Karachi on a trial basis, but plans to increase that frequency to 10-12 daily flights of large aircraft if a commercial deal is reached with the local airport authority.

Pakistan has also allowed the U.S. military to use several of its airbases for non-combat support of its operations in Afghanistan.

U.S. military involvement in Afghanistan has propelled a rapid rise in demand for jet fuel in the region. But getting hold of the product has not been easy, as transportation logistics are complicated and most neighboring refineries are not equipped to supply military-grade product. But help is coming from other sources.

Trading sources say a major European oil company has signed a deal with the U.S. military to supply it with around 1,500 tons (500,000 gallons) of jet fuel delivered into the Pakistani port of Karachi and then trucked up to the Afghan border.

"Since Sept. 11, some 69 million gallons of fuel were redistributed from existing bulk storage facilities, another 184 million gallons were lifted under existing bulk contracts, and an additional 36 million gallons were purchased under bulk contracts to support the military campaign in Afghanistan."

BRIGHT STAR 01/02

Showing our Resolve

By Lt. Terrence M. Simmons, SC, U.S. Navy

The planning for BRIGHT STAR 2001-2002 began approximately 35 days after the last United States entity re-deployed to the United States. The biannual exercise is the largest and most expensive exercise in the United States Central Command (USCENTCOM). BRIGHT STAR is a combined, joint coalition force exercise conducted in the Arab Republic of Egypt. The countries that participated in the exercise were the U.S., Egypt, Great Britain, Italy, France, Kuwait, Jordan and the United Arab Emirates.

Led by Gen. Tommy Franks, we put together what was supposed to be the most efficient and successful BRIGHT STAR to date. U.S. only conferences were held at MacDill Air Force base in Tampa, Fla., home to United States Cental Command (USCENTCOM); Fort MacPhearson in Atlanta, Ga., home to United States Army Central Command (USARCENT); and in New Orleans, La., home of the 377 Theater Support Command (TSC). Coalition conferences were held in Cairo, Egypt. As usual, the focus was to support the warfighter better than the last time with a smaller budget.

The logistical support is the sole responsibility of the Defense Logistics Agency (DLA); headquartered at Fort Belvoir, Va. DLA's concept to support the warfighter in a contingency is centered in the DLA Contingency Support Team (DCST). The object is "to coordinate, facilitate and expedite DLA supplies and services, bulk fuels, subsistence, contract administrative support and hazardous material disposal to in-theater customers." The DCST is a highly trained group of functional area experts and is designed to place what the warfighter needs in their hand when they reach back for it!

DCST is a combined team strategically co-located with the warfighters. The focus is to have a single focal point for all DLA support to the unified command or joint task force commander. The operating concept of DCST is to deploy forward into a contingency area of operation to provide the customer with a no-fail, first and last stop point of contact for support and assistance. Since DCST "lives" with the warfighters, it facilitates the quickest response time possible.

DCST does not replace daily operational lines of support. Instead it provides augmentation and backup to the units' operational lines of support. DCST is designed to support large theaters as well as smaller contingency operations.

The class III, or bulk petroleum support rests with the Defense Energy Support Center (DESC). DESC was responsible for providing three augmentees to DCST. Lt. Col. Guyton was tasked as the Command Support Element (CSE). He was directly responsible to Col. O'Hare (the DCST Commander) for all fuel issues. Guyton was supported by two Fuel Support Elements (FSE's); Mr. Terry L. Russell and myself. We were augmented from DESC's Middle East region. As quality surveillance/petroleum logistics officers permanently assigned to the Middle East, and the only team members assigned to USCENTCOM's area of responsibility (AOR), we provided extremely valuable experience and insight for Host Nation Fuel support to DCST. Fuel support was initially coordinated by DESC-Middle

Middle East (DESC-ME) and provided by host nation under an international memorandum of agreement (MOA) between the U.S. and Egypt. Under the agreement the U.S. is represented by DESC and the Egyptian government is represented by the National Service Projects Organization (NSPO). The NSPO is an organization similar to DLA. The organization provided and coordinated for all forms of logistics support. For class III support, NSPO used the Egyptian Air Force and Army as their operating agencies. The Air Force provided Jet A-1 with additives to produce JP-8, and the Army provided diesel and motor gasoline.

Mr. Russell and I deployed to Egypt on Aug. 29, 2001 to ensure the first drop of fuel would be delivered on time and on spec to set the precedence for the entire exercise. During the exercise, host nation fuel support was provided to six primary locations: Mubarak Military City (MMC)/Pyramid log base, Ras Al Tin/Abu Qir, Port of Dukahla/Agami, Cairo West Air Base, Beni Suef Air Base and Hurgada Air Base.

These six locations encompassed 500 square miles, with the longest driving distance (450 miles) being between Hurgada and MMC. In accordance with the "single fuel on the battlefield" doctrinal concept, Jet A-1 was blended to produce JP-8 and provided to all retail customers at nearby receipt locations.

The large landmass, which had to be covered for fuel support, was the driving reason Lt. Col. Marshall Jones (DESC-ME's Commanding Officer for the beginning planning stages), and Lt. Col. Ralph Wells (DESC-ME's present Commanding Officer) chose to provide two FSE's to the DCST. The plan proved to be invaluable.

The largest obstacle Mr. Russell and I faced, was the actual additization of Jet A-1 in all of these locations at the same time. You must understand, that the Egyptians do not use JP-8 for their military. The only time the Egyptians become familiar with JP-8 is when BRIGHT STAR occurs every two years.

Needless to say, there were growing pains.

Upon arrival to Egypt, we found additive injectors left in the same place, and in the same position, as they were when BRIGHT STAR 1999/2000 ended. The injectors were clogged and some were unserviceable. However, this was a "Joint Service" exercise, and expert assistance was sought and found within the Army and Air Force petroleum personnel. Master Sgt. Gilbert Lee, U.S. Army, provided initiative in fabricating parts locally, and Master Sgt. Herbert Welday, U.S. Air Force, provided on-site additive injector calibration/training on the injectors to the Egyptians. Other invaluable military personnel included Master Sgt. Connie Dorr, Tech Sgt. Matthew Sigstad, U.S. Air Force, and Staff Sgt.Curtis Morgan, U.S. Army.

On Sept.11, 2001 Mr. Russell, myself and the afore mentioned personnel were at Borg Al Arab Air Base. This was the location that provided JP-8 to MMC/Pyramid Log Base and ensured the additive injector was calibrated and properly fitted with the correct fittings. We completed as much as we could before dark, and decided to spend the night.

Borg Al Arab was approximately 150 miles North of Cairo where we were based. We were in the process of checking in to the Borg Al Arab Hilton when the tragedy unfolded. We did not know if the exercise was going to be cancelled, until we heard President Bush telling the American people "We are going to show the world our resolve." With that being said, Franks spoke with the exercise director and said the exercise would continue as planned.

After ensuring all JP-8 producing sites, except Beni Suef, were in working order, Mr. Russell was re-deployed to Bahrain to assist with our newest mission "Enduring Freedom."

I was in Egypt with one site left to get in working order for BRIGHT STAR to continue. Thankfully, Beni Suef was not to come on-line until Oct. 2, 2001, so I had some time. Master Sgt. Welday and myself set out for Beni Suef. Upon arrival we found the worst fuel replenishment site for the entire exercise.

The injector was completely unserviceable, and the only pumps in use were backup pumps. Beni Suef was the operational hub for the fighters and aircraft. All fuel support was strictly host nation. The injector, Jet A-1, was pumped from underground storage tanks located at the Air Base and blended by the Egyptian Air Force (EAF). Col. Azzam Atef (EAF), my point of contact for NSPO for all fuel matters, promised to deliver a new additive injector in time for Beni Suef to become an active site for Bright Star. He came through at the last minute. Master Sgt. Welday calibrated and trained the EAF fuel department to use the injector properly. We now were producing JP-8 at each location for the exercise.

USCENTCOM's forces used over three million gallons of fuel, and for the first time ever, did not return one drop of JP-8 to the Egyptians. This feat is extremely important, because the U.S. government according to the MOA does not receive any credit for the return of JP-8. The combined efforts of the Army and Air Force personnel made this possible. Major Robert Simelaro, USCENTCOM's Joint Petroleum Liaison Officer coordinated the transfer of 50,000 gallons from the Army to the Air Force mitigating the return of over $52,000 of unused JP-8 to the Egyptian government.

In the end, this was the most efficient and most successful BRIGHT STAR ever. We completed our mission with our hearts in other places because we were mourning our lost innocent citizens from the attacks of Sept. 11. We wanted to be a part of "Enduring Freedom", however, we were, we did as the President and Franks asked; we showed our resolve, and we showed it well!

Front row kneeling:
Master Sgt. Gilbert Lee (U.S. Army), Staff Sgt.Curtis Morgan (U.S. Army) and Maj. Robert Simelaro (U.S. Army)

Second row:
Maj. Gregg Matsumoto (U.S. Air Force), Master Sgt. Connie Dorr (U.S. Air Force), Tech. Sgt. Mathew Sigstad (U.S. Air Force), Lt. Col. Ralph Wells (DESC-Middle East Commander) and Lt. Terrence Simmons (DESC- Middle East Petroleum Logistics Officer)

Back row:
Richard Calloway (DESC), Col. Emmet O' Hare (DCST Commander), Master Sgt. Herbert Welday (U.S. Air Force) and Tech. Sgt. Hudson (U.S. Air Force)

Apple Jelly: Not Just A Snack Food

By Lindsey Hicks

"We've got Apple Jelly!"

You might expect to hear that phrase at a restaurant when asking about spreads for your toast. But it's not a welcome exclamation when an Air Force "fuelie," looking into a jet fuel filter housing element, discovers a dark-brownish, gel-like substance sticking to the elements and collected at the bottom. To that person, "Apple Jelly" can potentially mean operational problems, extra work and expenditure of scarce resources.

The term Apple Jelly was coined several years ago to describe a specific problem that's been plaguing users of military jet fuel, particularly JP-8, consistently since the mid 1990s. It describes a substance made up of roughly equal parts of water and the chemical compound Diethylene Glycol Monomethyl Ether, or DiEGME. DiEGME is required for use in military specification jet fuels as a fuel system icing inhibitor (FSII). FSII prevents minute amounts of free water in fuel from freezing into solid particles that can disrupt the flow of fuel. Apple Jelly can be found in various locations in military fuel distribution systems after the injection of DiEGME.

Apple Jelly varies in color and consistency. The color ranges from light amber to very dark brown. In extreme forms Apple Jelly is gummy and gelatinous or thin and watery. Most often it is found at a base activity level, involving, for example, filter coalescer or water absorption elements, storage tanks, refuelers and aircraft fuel tanks. For reasons still not fully understood, Apple Jelly tends to appear most often during cold weather, making it primarily a seasonal phenomenon.

To some extent, Apple Jelly has been found in fuel systems since DiEMGE was first specified by the Navy for use in JP-5 jet fuel in the early 1980s. Sporadically, quantities of a dark brownish liquid would be found in fuel storage tanks and drainage sumps, known to be composed primarily of DiEGME and water, however, as these occurrences caused no significant operational problems, the phenomenon was never specifically categorized. It was treated by the Navy as normal water bottoms or sump drainings. During this period, the Air Force specified a different icing inhibitor, ethylene glycol monomethyl ether (EGME) for use in its primary fuel of choice, JP-4.

In the early 1990s, the Air Force completed a conversion from JP-4 to JP-8 as its primary fuel and primary FSII was changed to DiEGME for safety and environmental reasons. Shortly after these changes, the Air Force began experiencing consistent problems with Apple Jelly formations.

The primary detrimental effect of the substance over the years has been its contribution to the rapid disarmament of filter coalescer elements, requiring more frequent change outs of the elements, thus elevating maintenance costs. Most military locations that report Apple Jelly occurrences have found it either after experiencing extremely high pressure-differential readings in filtration operations, or obtaining higher than allowable measurements of free water in fuel after filtration. Both cases are indicative of the failure of the filter coalescer elements involved. Significant amounts of Apple Jelly, usually in pure liquid form, are often found in the housings of the elements, which must be drained off.

The root cause of Apple Jelly formation is the relationship between water and FSII. The DiEGME is able to work effectively at its task because, although it is soluble in both hydrocarbon fuels and water, it has a much greater affinity for water and seeks to solubilize with it preferentially.

Because of this, any significant water which comes in contact with the fuel (either by absorption from the air moisture, or from rain or bodies of water) will extract any FSII the fuel contains, which will then fall out with the water as tank or filter vessel bottoms to be drained off and disposed of. When FSII falls below its required level in fuel (0.10 to 0.15 percent by volume for JP-8) it must be replenished by reinjection. When Apple Jelly forms, water and DiEGME are extracted from fuel and combined in a mechanism involving the chemistry of the fuel and other fuel components.

Apple Jelly, as defined, can be found in cases other than with failures of filter elements. It has been found in storage tank drainings of bottoms (distinguishable from normal water-FSII mixture bottoms due to its color and thickness); in drainings from aviation fuel trucks and most significantly over the past year, in several Air Force C-5 and C-17 cargo aircraft sumps, where its presence disrupted the ability of computer probes to correctly measure fuel quantity.

Apple Jelly began appearing frequently at Air Force locations soon after the changeover to JP-8 and DiEGME, but it is not yet clear if only these changes alone were the key to the substance's sudden proliferation.

Keeping excess water out of fuel is very important in the overall scheme of quality and safety, and all experts agree that keeping fuel as "dry" as possible will minimize Apple Jelly formation. It is important to thoroughly mix FSII with fuel to ensure that it does not separate out easily, which could possibly lead to increased Apple Jelly occurrences.

Each of these aspects have been investigated in recent years by both the Defense Energy Support Center (DESC) and the military to determine how adequately they are being managed.

In 1998, a "Tiger Team" was formed, spearheaded by DESC

Apple Jelly formation

and comprised of representatives from the military's technical and fuel quality organizations in order to put forth a consolidated effort to tackle the Apple Jelly problem.

The team conducted several site visits to locations affected by Apple Jelly and developed a chartered plan of action to find a solution. It proved to be difficult for the team members to focus their efforts consistently on the problem, primarily because of the seasonal and sporadic nature of the phenomenon.

DESC implemented procedures to reimburse activities for the costs of replacing filter elements at affected bases until identification of the cause of the Apple Jelly formation could be identified. This managed the problem to some degree by replacing the expended element replacement costs.

After reports of Apple Jelly found in Air Force C-17 aircraft came to light in late 2000, the problem gained a new priority and it was elevated to the attention of flag officers who wanted greater effort put forth to solve it. DESC decided to take action and select an experienced professional in fuel technology and research to conduct a focused study on determining what causes Apple Jelly and developing solutions to combat it.

In January 2001, DESC awarded such a contract to Southwest Research Institute (SwRI) in San Antonio, Texas. For many years, SwRI had contracted for the Army's Tank Automotive Research, Development and Engineering Center.

They presented a plan that incorporated an aggressive laboratory study of actual samples of Apple Jelly collected from affected locations and field visits to affected military bases and corresponding DESC terminals to assess and document operational information that could be related to Apple Jelly formation.

DESC coordinated with the services to have over 100 samples of Apple Jelly and corresponding fuel to be sent to SwRI for chemical and physical analyses in order to determine the mechanism of the substance's formation. To validate the analyses performed, the SwRI researchers succeeded in creating synthetic Apple Jelly to compare to true field samples.

The field site visits were conducted by **C4e**, a fuels consulting company comprised primarily of experienced former Air Force fuels personnel, which SwRI subcontracted. The information gathered was used as additional guidance for the laboratory work performed.

At the same time that the SwRI study was initiated, DESC partnered with the Air Force to form an Integrated Process Team (IPT), in order to coordinate with efforts that the Air Force had already begun on its own end to address the ongoing problem. The IPT is a three-tiered effort: DESC is responsible for fuel chemistry and fuel distribution issues, the Air Force Fuels Research Laboratory at Wright-Patterson Air Force Base in Ohio is responsible for non-fuel chemistry and logistics-type research and the Air Force Weapon Systems Support Branch would oversee aircraft equipment and engine-related issues.

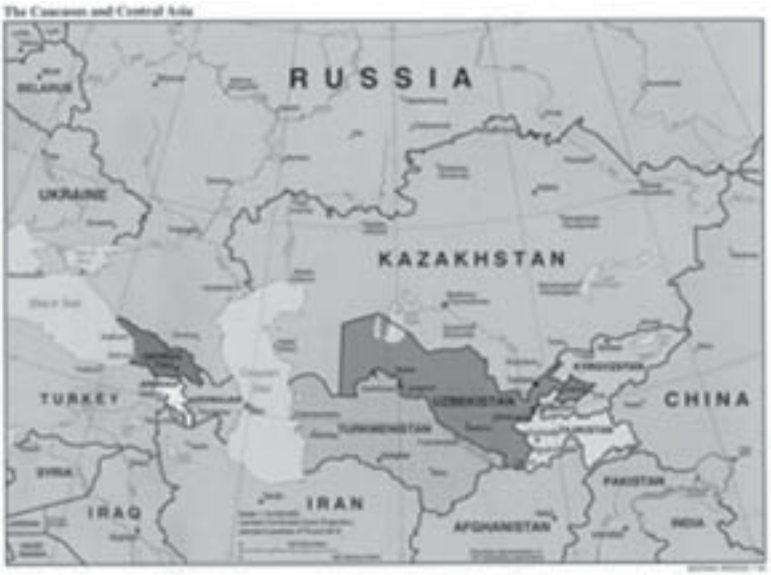
The IPT regularly exchanged information on the various aspects of the study over the course of 2001.

The SwRI study concluded in August 2001. In October, the researchers presented the details of the finding to DESC, the Air Force and the Navy, including explanations of the differences between thin and thick varieties of Apple Jelly, the key components believed to be involved in the formation of both and recommendations for corrective actions.

The final report on the study has been completed. This report was subjected to an extensive technical peer review involving technical experts from the Department of Defense and private industry.

The Stans

By Warren E. Boin, Jr.
AVCARD Vice President Marketing and Business Development



The events of Sept. 11, 2001 have so forever changed our lives that it is difficult to remember what life was like before. I can only imagine that not too long ago the attack on Pearl Harbor was just such an event for another generation.

Although the passage of time will help us find ways to cope with our anger and grief, the process of revising our nation's policies and procedures to help protect us from further terrorist acts is now our top priority.

As part of that effort, we now recognize that terrorism is a worldwide problem which can strike anywhere at anytime. As Americans we can no longer afford to ignore the events and actions of distant nations and terrorist organizations.

Gaining a more acute awareness of this new world order, has forced many of us to wish we had paid more attention to world cultures and geography back in high school and college. Suffice it to say, that those who may have been daydreaming in class back then, and I include myself in that group, are now getting a crash course thanks to the barrage of news reports, press conferences, investigations and expert testimony.

But as fate would have it, we at AVCARD would soon find that we were about to embark on a field trip to add to our learning experience.

Our travels would take us to five countries, six cities and a wide range of climates in an area of the world known as the "Stans".

You see, the Stans are quite strategically located to the north of Afghanistan and therefore interest in these countries has skyrocketed since Sept. 11. Since one of AVCARD's largest cardholders is the U.S. Government, we had to verify our aviation fuel and services suppliers were prepared to meet the support needs for the U.S. Military and humanitarian operations.

Therefore, we chartered a Hawker 800 out of Zurich and AVCARD began a two week journey throughout this region visiting aviation suppliers, airport authorities, U.S. Embassies and foreign government officials. During this time we inspected airport facilities, contracted for

additional fuel supply, and reviewed distribution logistics. What we learned about this region, its aviation infrastructure, business practices and people proved that despite the challenges they were all anxious and able to meet these increased demands.

The Stans, as they are affectionately called by many in the region, are one part of the group of countries that now make up the Commonwealth of Independent States (CIS). "Stan" actually means "land of" and each of these countries has a predominant ethnic population that is also incorporated in its name. For instance Kazakhstan is the "Land of the Kazakhs."

Ten years ago all these countries were part of the old U.S.S.R. and after the collapse, they all became separate countries. The process happened so quickly that many of them were ill prepared to deal with the economic, political and social ramifications of independence. However they all have a strong desire to overcome these challenges and they are working hard to transition to market driven economies.

Of the people we met, all were very friendly and supportive of all efforts to combat terrorism. Of course there are radical factions in each country that do not share these views but, during our trip it did not appear that these groups were anything but a small minority. As long as you stay away from the borders, and let's face it this is usually the seedier side of most countries, travel throughout the region was pleasant and we felt relatively safe.

As tragic as the Sept. 11 events were, they have provided the Stans with an enormous opportunity. Of greatest significance is that these countries have vastly underutilized aviation resources. Although much of these resources have not been maintained and are in various states of disrepair, they were all constructed to accommodate volumes far in excess of current levels. This includes everything from runways, to fuel farms, to terminal buildings and freight facilities.

"Of the people we met, all were very friendly and supportive of all efforts to combat terrorism."

One interesting phenomena that is characteristic of all the airports in the region are the rows of cannibalized aircraft that litter the tarmacs and grassy areas around them. Without an efficient spare parts industry for domestic aircraft, the airlines had to resort to stripping older aircraft of serviceable parts to keep the remaining fleet in the air.

Consequently the hulls of these aircraft are now strewn all around the airport as a stark reminder of the inefficiency of a government controlled economy.

As we traveled from airport to airport we also realized that there were striking differences both in business practices and degree to which they had embraced the concepts of a free market economy. Below are some of the observations we made during our trip to six airports in the region.

Before we detail our experiences we would like to offer some advice. Shop around before arranging any services required for your trip. Flight planning companies such as Universal Weather, Air Routing, Baseops and Jeppesen provide competitive options for weather, flight plans, slot reservations, over-fly permits, customs expeditors, and other aviation data and filing requirements. Billings for these services include a fair profit for their efforts on your behalf.

Although these companies can also provide fuel and other ground services they are not always your best option or price. It is to your benefit to shop around for the best prices for both fuel and other ground services. Don't assume in error that the flight planning company needs the fuel sale to profit from your business.

Bishkek, Krygyzstan

Known as Frunze from 1926 to 1991, Bishkek (population 675,000) is the capital of Kyrgyzstan, according to one source it is the only town in the world named after a wooden plunger - a bishkek is a churn used to make fermented mare's milk. In an excellent article on the Stans in the February 2002 National Geographic, they claim the city means "five knights." We will compromise and claim the city is named after "five knights who were making fermented mare's milk with a wooden plunger." Bishkek is a pleasant city with wide streets and to our surprise we saw many stately homes throughout the city. We arrived at Manas International Airport in a blinding snow storm and in addition to our Hawker the only other aircraft on the tarmac was a C-17 from Charleston, S.C. We sought our refuge under the wing. The airport currently has approximately four commercial flights a week despite the fact that it has a large terminal building, 13,780 foot runway and enough fuel and service suppliers to handle considerably more traffic. Of course this is precisely why the airport is of interest. The airport is underutilized and immediately available. AVCARD has both Aalam Services and Manas International Services as contract fuel suppliers. Although AVCARD is readily accepted here, don't expect the concept of credit to be widely accepted.

Shown in Photo: Aalam Services Fuel Farm at Manas International Airport

We had to jump through a number of hoops to get our credit card and contract fuel program established. Subsequent to our meetings the U.S. military has decided to use this airport for humanitarian efforts.

Almaty, Kazakhstan

Almaty, the former capital of Kazakhstan was founded in 1854 and is one of central Asia's most cosmopolitan cities. There are many shops, parks, hotels, restaurants and

Shown in Photo: U.S. C-17 next to AVCARD's Chartered Hawker at Manas

casinos throughout the city. I was even told that within easy driving distance from Almaty there was great skiing. Kazakhstan, the ninth largest country in the world, covers approximately 1 million square miles. Its vast Central Desert is the location where all former Soviet and current Russian space vehicles are launched. It is also the site of the largest space assembly station in the world.

The airport was more fully utilized than Bishkek and has a General Aviation Terminal for domestic flights. The commercial airline terminal was destroyed by a fire on July 9, 1999, the new terminal has been under construction ever since. Fuel and ground services are available using AVCARD through Berkut Air Services. The handling of our flight was without a hitch. There was much more aircraft traffic at Almaty and we noticed at least two U.S. registered business aircraft. If you are planning a trip to Almaty in the near future, you will find a pleasant lack of the normal bureaucracy and an airport that understands general aviation. Just don't expect to receive U.S. standards of service...they are working on it though.

Shymkent, Kazakhstan

Shymkent is a city with both a large industrial base as well as considerable agricultural resources. Tourism also plays a major role, primarily in the summer months. Of great importance to AVCARD was that Shymkent is also the location of one of the principle refineries supplying both Kazakhstan and Kyrgyzstan.

Shymkent also has one of the areas best breweries and the beer is quite good. We tested a number of bottles to make sure it was consistent – it was hard work but somebody had to do it.

Bunkers with what looked like old MiGs lined the side of the runway as we landed at Shymkent. The airport had plenty of ramp area and on one portion of it there were what looked like vintage biplanes. The airport has a good compliment of fuel trucks and other ground equipment. You have to ignore the fact that the outside appearance of most of the equipment is rather shabby.

The terminal building is new and was designed to allow passengers easy ingress and egress, but don't expect this or any of the other airports to meet air defense artillery standards.

Tashkent, Uzbekistan

Tashkent is the capital of Uzbekistan and was once the fourth largest city in the former U.S.S.R. Tashkent is the central Asian hub and has the best international flight connections of any of the other airports visited. The downside is that the country still operates with considerable bureaucracy reminiscent of the old Soviet days. Tashkent is a city of contrasts. Some parts have the look and feel of the old USSR, and then you turn the corner and discover a water park just like any you would find elsewhere in the world. In general this appeared to be a very safe city, but at the cost of a considerable police presence everywhere. The people we met in Tashkent were very anxious to point out that their country was not hostile to visitors and they looked forward to entertaining more tourists in the future. There is a lot to see in Uzbekistan and we hope that it does become a more tourist friendly place to visit in the near future.

Our hotel was a designated rest stop for pilots flying missions in the region. The opportunity to stay in a good hotel and take a hot shower helps make the long days in a tent more bearable. When we asked them about the war in Afghanistan they all had the same response "the good guys always win."

The airport facilities were dismal and dreary but the airport ramp had more activity than any other airport on our trip. On the ramp were numerous business aircraft from around the world and the AVCARD contracted fuel and services supplier, Uzbekistan Airways handled our aircraft's

fuel and servicing needs promptly and efficiently. The customs arrival area however was quite dingy and the process was slow. Make sure you fill out two Customs Declaration forms (there is no carbon paper) before you get in line.

Dushanbe, Tajikistan

Our introduction to Dushanbe was a comment made by a U.S. Embassy staff member in Almaty who was headed there before us. He was relieved that he had just remembered to pickup his security gear. When we quizzed him on this gear, which included a flak jacket, we suddenly felt we were going to be more than a little "exposed." Upon arrival in Dushanbe we were keenly aware that for the first time on our trip we were very close to harms way. The city has a "wild west" feel and as a result of its proximity to Afghanistan, was swarming with journalists, various "officials" and numerous unsavory characters looking to take advantage of any situation. This is also a country and city that until 1996 had been ravaged by Civil War and despite a cease fire, continues to harbor much deep seated resentment. Consequently, we did not venture too far from the beaten path. We also found out that the Sunday we arrived in Dushanbe was the last day of Ramadan and the next day was a holiday, which oddly enough appeared to be a combination of Halloween and Thanksgiving. In the morning the children go from house to house all dressed up in their best clothes and collect candy or coins. In the evening the families gather for a formal dinner celebrating the end of the Ramadan fast.

The airport was busy with foreign military traffic, mostly French C-130s flying humanitarian supplies. The airport was not over built as some that we had seen and appeared to be clean and all the flight, passenger and crew requirements were handled very efficiently by the AVCARD fuel and services supplier, Tajik Air.

Getting business accomplished in Tajikistan takes time, so don't go there expecting to do anything quickly, even by Stan standards.

Ashgabat, Turkmenistan

Ashgabat is a very modern city and everywhere you look there is a statue or picture of the president of the country, Saparmurat Niyazof. Mr. Niyazof is the president-for-life and he prefers to be called Turkmenbashi, "leader of the Turkmen."

Given the cost of replacing all the edifices to his leadership, the country can not afford to replace him any time soon.

The city is often referred to as the Las Vegas of the Stans and both the climate and the city's plethora of statues, casinos and lighted buildings contribute to this image.

One of the countries biggest hassles is the currency. Officially the exchange rate is about 5,200 Manat to one U.S. dollar (USD); however the unofficial rate can be as high as 21,500 Manat to one USD. It appears that every bellman and cab driver is in the foreign exchange business and even in 10,000 Manat denominations $100 USD converts to quite a stack of money. The stores and markets are bustling in this city and if you are interested in Persian rugs we were told this is a good place to buy them.

The airport terminal is brand new and very modern. The fuel facilities and equipment appeared to be well maintained and the personnel very customer service orientated. The AVCARD fuel supplier and handler is Turkmenistan Airways and they can handle all your needs promptly and efficiently.

Defense Department Seeks to Reduce Costs, Speed Environmental Cleanups Using Hydrogen Release Compound®

An innovative groundwater remediation product, Hydrogen Release Compound® (HRC®), developed by Regenesis of San Clemente, Calif., is proving extremely efficient and cost-effective in degrading a range of contaminants commonly found at Department of Defense (DoD) and military-related sites.

From the more ubiquitous chlorinated solvents perchloroethene (PCE) and trichloroethene (TCE) to nitroaromatic explosives and perchlorate, HRC is being used to address these groundwater contaminants and others at two major DOD / Superfund sites in Colorado. At the Army's former Pueblo Chemical Depot, a recent study by Earth Tech, Inc., verified HRC's performance and concluded that enhanced anaerobic bioremediation using HRC caused "reductions in the concentrations of all contaminants of concern at the site."

Meanwhile a 60-day bench-scale study at the former Rocky Mountain Arsenal chemical weapons site in Adams County, funded by the Environmental Protection Agency's Superfund Innovative Technology Evaluation (SITE) program, has shown significant reduction in concentrations of explosive contaminants and nitrates (by up to 98 percent) within the initial test period of 105 days.

HRC is a passive, proprietary, *in-situ* bioremediation treatment that works by accelerating the natural attenuation of contaminants in the soil. When HRC, a viscous, honey-like substance, is injected into the soil, contact with groundwater causes the compound to slowly release lactic acid. Naturally occurring anaerobic microbes metabolize the lactic acid to produce hydrogen, which in turn is used by other microbes to break down anaerobically degradable compounds.

Compared with conventional soil removal or pump-and-treat methods, total costs for HRC treatment are often one-half to two-thirds lower than competing technologies. HRC also has the added benefit of being unobtrusive, quiet and easy to apply. Due to the nature of its application techniques, HRC can also be applied beneath the foundations of structures and in difficult-to-reach spaces such as between buildings or in small, confined areas.

Since the late 1980s, the DoD has mounted a massive environmental compliance and cleanup effort at military installations and decommissioned bases nationwide. Contamination from explosives and their derivatives has become a focal point for this effort; a recent Defense Department paper noted that more than 1,200 sites were impacted with explosives, and that 87 percent of them showed contamination in the groundwater.

DoD has also recognized that conventional cleanup technologies are often too costly and invasive, requiring the transport of large volumes of soil and/or water, and are also characterized by energy, labor, and material-intensive practices. As a result, the DoD has been actively seeking out more innovative, preferably on-site and *in-situ* technologies, including bioremediation technologies, which hold the promise of better performance and increased economic benefits.

The Pueblo Chemical Depot (PCD) and Rocky Mountain Arsenal (RMA) sites presented an ideal application opportunity for HRC and accelerated anaerobic dechlorination activities. The PCD site had been used for more than three decades for large-scale munitions storage and reprocessing operations resulting in the release of trinitrotoluene (TNT) and hexahydro–1,3,5-trinitro-1,3,5-triazine (RDX). Additionally, breakdown products of TNT such as 2,4 DNT and 1,3,5 TNB were also found in the aquifer.

The 27-square-mile RMA facility, currently being restored as a National Wildlife Refuge, was established during World War II as a chemical weapons manufacturing site and was later used for the manufacture of nerve agents, pesticides, and herbicides, with liquid wastes being disposed of in numerous unlined waste-disposal basins and trenches. Compounds of concern at RMA have been called a "witches' brew of contaminants," including PCE, TCE, carbon tetrachloride, chloroform, dieldrin (a pesticide), and unusual compounds such as diisopropylmethylphosphonate or DIMP, a by-product of nerve gas production.

Since conventional remediation methods such as pump-and-treat or excavation would have been prohibitively more expensive and time-consuming, preliminary bench-scale and pilot tests were performed at both sites before using HRC. These tests offered strong indications of whether or not HRC would be applicable at the sites either making or breaking the way for full-scale application. As mentioned, the PCD site has already completed a successful pilot-scale test and is awaiting further direction for full-scale implementation. RMA has completed a laboratory bench-scale test and is currently in the field pilot phase of the program.

HRC and a second Regenesis product, ORC® (Oxygen Release Compound®) have also been applied at several other DoD facilities, including Cape Canaveral, Andrews Air Force Base (Maryland), the Beaufort, S.C., Marine Corps Air Station, and the Naval Amphibious Base in Norfolk, Va.

Several of these and other projects have been published in peer-reviewed journals and various conference proceedings.

For additional information on these sites or about HRC, please contact Mr. Bryan Vigue at Regenesis by telephone at 949-366-8000 or by e-mail at bryan@regenesis.com or visit www.regenesis.com.

Incorporated in 1994, Regenesis (formerly Regenesis Bioremediation Products) is recognized today as the world's leading developer and distributor of products used to restore contaminated groundwater, principally Oxygen Release Compound (ORC®) for remediation of aerobically degradable hydrocarbons and Hydrogen Release Compound (HRC®) a slow-release electron donor for treatment of anaerobically degradable compounds such as chlorinated solvents.

These products are sold to hundreds of independent environmental engineering and consulting firms, who provide an independent verification of the products' effectiveness on their customers' sites.

Regenesis'products have been used to restore groundwater quality at over 6,500 sites in 12 countries around the world, including sites owned by oil companies, real estate firms, pipeline companies, refineries, utilities, and transportation companies.

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"Director's Message"

Almost everyone from the closing offices was successfully given new positions, hired by other organizations or retired. We committed to do all we could to help our people, and I'm pleased we were able to keep our commitment.

The 2002 Worldwide Energy Conference held recently in Washington, D.C. was a huge success! With 1,225 attendees, we doubled the number of participants from our last conference. Thanks to everyone who organized, presented and participated this year. Your dedication and commitment made the difference.

Last I hear that the Defense Logistics Agency, DESC in particular, is getting high marks from the biennial Combat Support Agency Review Team (CSART). Every two years, the Joint Staff is required to perform a review of the Combat Support Agencies to evaluate how well they are doing their jobs. While we are always told not to "count our chickens …," I know from your performance throughout Operation Enduring Freedom that DESC has really made a mark. Everyone in DESC can be proud for putting the customer first!

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"Small Business Reaches Out"

Initiative 3: Waiver of Nonmanufacturers Rule

Section 303 (h) of the Public Law 100-656 and Section 210 of Public Law 101-574 incorporated into the Small Business Act requires that agency contracts be directed solely to Small Business manufacturers under set-aside provisions.

This requirement is commonly referred to as the Nonmanufacturer Rule. The federal government has the ability to waive the requirement to use Small Business manufactured product when it is determined that these sources are unavailable.

There are two types of waivers to the Rule which are referred to as "individual waivers" or "solicitation-specific" and "class waivers." Only the contracting officer for the federal government may request an individual or solicitation-specific waiver. A contracting officer may request an individual waiver for more than one item on a solicitation. The request should be in writing and addressed to the Associate Administrator for Government Contracting and should specifically state the class (or classes) of products for which the waiver is sought.

DESC-DU is proposing to evaluate the need and circumstances, on a purchase program basis, to begin to use the waiver process when it is found that there are limited or no manufacturing sources. A waiver has been established for the Direct Delivery CBU for Customer Organized Groups 3.

To submit articles/photos for publication please send to:

Fuel Line Editor
8725 John J. Kingman Road
Suite 4950
Fort Belvoir, VA 22060-6222
FuelLineEditor@desc.dla.mil
DSN 427-9691
Commercial 703 767-9691